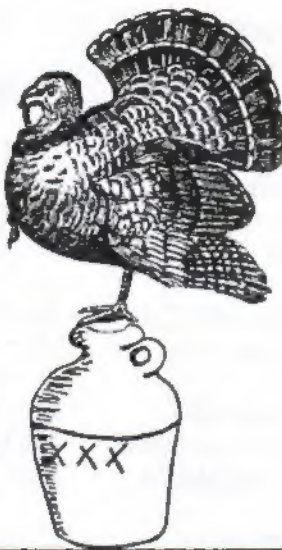


THE NCCC

JUG



NEWSLETTER OF THE
NORTHERN CALIFORNIA
CONTEST CLUB

EDITOR, W6ISQ
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82 BELBROOK WAY
ATHERTON, CA., 94027

ED ASST. KC6NFE

NUMBER 234
NOVEMBER, 1991

PRESIDENT: KA6ING

V.P./ CONTEST CHAIR: N3AHA

SEC /TREASURER:KJ6LD

DIRECTORS: W6ISQ WA6SDM N6TV W0ZZ

CONTEST ANALOG VOICE KEYER

Part 2 By Bob Wolbert, N6IP

Part 1 presented the basic circuit with message recording, playback, and addressing and a T / R switch, a STOP function, a CQ loop timer, and "CT" interfacing. Part 2 describes microphone input multiplexing, improving signal-to-noise ratio, and operational results from CQP'91. A complete schematic is shown.

Operational Comments

This keyer works! Even in a hostile RF environment such as a CQP expedition to a Tuolumne County mountain top without a proper ground, the voice keyer played. While my XT screen was dancing in beat with the keying, making

(Voice Keyer Part II, con't page 4)

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BREEZE FROM LOUESE

It's Radio Club Go To Meetin' Time

W6ISQ: Hi Louese, what do you want to tell all your Miserable Minions (MMs) this month?

KA6ING: Hi Jack.

ISQ: Don't say that at an airport!

ING: They are not MMs.

ISQ: They changed since last month?

ING: They are BBs.

ISQ: Ahhh Ha. What's BBs? Big Bums?

ING: BBs is "Buzzing Bees". At the Wagon Wheel meeting I couldn't hear myself think for all the talk-buzz, talk-buzz, talk-buzz noise. Just like bees.

ISQ: We'll have WA6AUD write a chapter about how to keep bees from buzzing.

ING: The room was too small. Never heard so much noise.

ISQ: Too many callers on the same frequency. Start a list.

ING: But I got lost on the way to the Wagon Wheel and it took four folks working handi-talkies to get me there. So I wasn't in much humor to hear all that bee chatter.

ISQ: From what I heard, it was a great meeting.

ING: We took in five new members.

ISQ: Congratulations. Gotta pay for the JUG some way.

ING: Big News is that the November meeting will be a joint meeting with NorCal DX Club on Friday, November 8, at the Holiday Inn in Belmont.

ISQ: And what got these two outstanding groups talking to each other?

ING: The ecumenical spirit of Father Moran, 9N1MM.

ISQ: Hey, that will be a good one. We'll advertise that meeting in big type in a box.

ING: You better do that because everyone needs to send in \$17.50 for each reservation to NQ6X before Nov.4.

(Brese Con't Page 2)

(Brese Con't from Page 1)

- ISQ: Everyone should send in reservations before Nov. 4. See accompanying advertisement.
- ING: I just said that! Now back to the last meeting at the Wagon Wheel. **BILL, W6OWQ** came all the way down from up nawth.
- ISQ: Oh gosh, sorry I missed ole Bill. That's a long trip.
- ING: And **TOM N6BT** and **BONNIE**, came all the way from their house up the street.
- ISQ: Did they arrive in a sleigh?
- ING: Maybe! I heard strange noises outside—not bee noises. And everybody volunteered Tom to be Sandy Claws again this year at the Xmas Party.
- ISQ: Maybe his reindeer felt the greenhouse effect and took off early this year.
- ING: Oh, the Xmas Party will be at the Castaways at Coyote Point on Saturday, December 21. Put that in a box in the JUG, will ya?
- ISQ: Done. You think they can find Coyote Point this time? What else for the MMs, or BBs?
- ING: There will be NO regular meeting in November. The November 8 meeting with Father Moran is it for November.
- ISQ: Got it. No regular meeting in November. Father Moran meeting is for November.
- ING: I said that. We will substitute an exciting Board Of Directors meeting on November 18 at the Round Table Pizza at the nawth end of Sam Bruno.
- ISQ: A class improv comedy hour?
- ING: NO. There are Big Items and we would like everybody to attend. We want to discuss Contester of the Year, Rookie of the Year. I passed around a paper at the meeting for suggestions for those two nominations. **BOB, N6EK**, is studying (read: he lost it and is trying to find it) criteria for both. Put all that in a box, plse.
- ISQ: A box or basket?
- ING: And back to the last meeting again. It was great. Wonderful slides of the N5AU superstation layout shown by one of their TOPOPS, and NCCC member, **TREY WN4KKN**.
- ISQ: Think what they will do to us poor sixes when they point at JA!
- ING: Then Letterperson **BOB, N6TV**, gave another great reading about "10 Things to Avoid in Contests". I think that was it. Well, ten somethings not to do—or to do?? Or was it "10 ways to Win a Contest". Yeah, that must of been it. Sounds more

- like Bob. It was classic N6TV—great.
- ISQ: We have more of Bob's "ten things" for you in this *JUG*.
- ING: **JIM, WA6SDM**, finally got a beam to replace his vertical and inquired, "How to run up a good score"? The consensus of those present was, "Go for the rate, then go for mults."
- ISQ: Great advice, but going for mults is more fun. What else for the MMs?
- ING: The January meeting is a NO dinner meeting with pizza to follow. More later on that.
- ISQ: I'll tell 'em. What else?
- ING: I hope they all did a good job in the CQWW fone contest and maybe worked a few new ones along the way. I'll see everybody on November 8 at the Holiday Inn in Belmont..
- ISQ: Well, as Carmen said to Don Jose, Adiiiiiooooo—adio-adio—
adddeeeeeeeoooooooooooo—

DESPERATELY WANTED
Motor for Small Prop Pitch
Antenna Rotator
Call Collect W6ISQ, 415-854-3939
or DXSPN

TOP TEN THINGS TO AVOID IN PHONE CONTESTS

N6TV CLUES US IN YET AGAIN

10. SPILLING ICE WATER ON THE COMPUTER
9. EATING A PEANUT BUTTER SANDWICH
8. USING A HAND HELD MICROPHONE
TAPED TO YOUR NOSE
7. BREAKING THE SPRING IN YOUR
FOOT-SWITCH
6. BELCHING ON THE AIR
5. SETTING SPEECH PROCESSOR FOR MAXI
MUM DISTORTION
4. CALLING CQ ON THE WRONG VFO
3. ANSWERING THE TELEPHONE OR
KNOCKS ON THE DOOR
2. GETTING VOICE KEYS STUCK ON 59 03
1. THE FAMILY HOUR NET

TROSTEROSTER

The JUG editorial offices had a call from **PATTI, N6BIS**, who was in town for a few days. She had a great concern. She will probably not renew her NCCC membership because she is now living in San Diego. Of course, that is NOT a valid excuse, but it is the one she is using. BUT, she pleads that we publish the long-awaited story on the N6BT folding hinge antenna 'ere she deaprts her membership and while she still receives the JUG. We have relayed this urgent life-and-death request to hinge maker himself, **TOM, N6BT**, who promises—this time—to get out his calculator and computer design matrices, and get to work. He advises, "First, get a hinge". We are all QRX for this "BT, Hinges of Hades Antenna". Also Patti sent an interesting article we'll use next month.

A humorous, catch-22 story from Master Tower Climber, **FRED, K6YT**. This summer he installed a fine new electronically controlled garden watering system to save water. One small problem. When he keyes the transmitter ALL yard and garden sprinklers turn on full force. Add to the water dance Fred's new electronically controlled garage door opener yo-yooing in tune to Fred's RF also, and you have quite an entertaining show in the neighborhood.

Compounding the fun is that Fred, deep in the shack, doesn't know that all this is happening! Enter an automatic warning system—the dog. It seems that when the garage door flies open, the dog runs outside and begins barking. Fred hears dog. Fred goes outside. Fred turns off master gates and door opener. Well-trained pooch. Problem is the dog does not like to live his entire life in the garage. What Fred needs is one of those N6TV dandy ferrite beads wrapped around each water sprinkler. Just kidding Fred, Master Tower Climber. He now has the problems under tight control. Of course, he ain't got much of a lawn, but the electronics behave with proper decorum.

It's not over yet. Fred has another minor problem—an un-cooperative neighbor who will not allow him to try to fix the TVI or Stereo RFI or telly interference, etc. When Fred goes on the air, neighbor responds by banging a stick on the wooden fence about 10 feet from the shack. Fred, confidently, happily, calling the ZA didn't hear a thing from the fence. But the other neighbors later told him it sounded like a Gene Krupa (see note below) drum solo on the old fence bongos. Fred's selective ear filter developed when he was a flying radio operator on the old pre-WWII Pan Am China Clippers. P.S. He did get the ZA a few times and his neighbor got a lot of exercise! (Gene Krupa, if you don't know who he was, you're too young to ask.)

We too saw that picture of our world-champ **TOPOP, CARL AI6V**, in the recent mags. At least the ad said it was Carl, but it didn't look like the handsome fellow we know. Did the photographer forget to turn on the flash bulb? Good hunting at P40Victor, both modes.

BULLETIN BOARD

Congratulations to new licensee **MARSHA BRAINEN, XYL** of Howard, WZ6Z, now and henceforth to be known as **KD6AKQ**. Howard has kindly offered to swap an hour air time on the family rig for every hour she puts in climbing the tower. That full sized, three element 80-meter job oughta be worth at least three months of air time.

We know many of our contest heros are out there across the world giving all for the Big contests on Fone and CW. Of course, **P40 VICTOR** is expected to churn up a swath. And we hope **N6 KILLER TOMATO** found a contest shack somewhere. And **TREY, WN4KKN**, will be in ZP. The fellas from Southern Cal are all over the world this contest. We wish everybody luck, especially those going for a world record the last time out for this sun spot cycle.

Had a good letter from from **K3WW** telling of a major attempt by **JOHN, W2GD** to break the All-Band Single Op CW CQWW record. John will be signing P40W, Aruba. He will have some fine equipment and stands a good chance at the record if 10 will hold up. You have worked John in the past as P40GD. We hope to have some preliminary results in the December JUG.



N3AHA
N6TV
KA6ING
KJ6LD
Get
Serious
at Board
Meeting
August

ATTENTION ALL NCCC'rs

Note Special Date
for
NEXT MEETING

NOVEMBER 8

A NCCC AND NCDXF JOINT MEETING

Honoring
FATHER MORAN, 9N1MM
Guest Speaker

at
BELMONT HOLIDAY INN
CONVIVIALS 6 P.M. DINNER 7:30 P.M.

Send **RESERVATIONS BY NOVEMBER 4**
To **Bob Wilson, NQ6X, 1743 Valpico Dr.**
San Jose, CA., 95124
CHOICE: BEEF, CHICKEN, OR VEGETARIAN
\$17.50 PER PERSON (incl tax / tip)

serial numbers unreadable, and a telephone answering machine screamed in protest, the keyer retained its monotone "CQ" message. Unfortunately, my original electronic microphone interfacing design did not fare as well and a mechanical switch was needed to manually select between keyer & microphone. This extremely inconvenient arrangement severely restricted the usefulness of the voice keyer, which was thus relegated to CQ machine duties.

Fidelity

The audio quality of the ISD1020 twenty-second low bandwidth IC was quite acceptable. No one was confused when a "live" response was received after the mechanical CQ. The same station microphone was used for recording the messages since a very noticeable difference occurs between a electret element and the Heil HC-4 communications microphone, even when output amplitude differences are eliminated.

Audio Output Drive

Adequate microphone drive was provided by the output amplifier/attenuator. No hum was present. A bit more drive capability would have been useful, so the new schematic shows lighter output attenuation.

AGC

The ISD1020's record AGC circuit really compresses the audio. Setting speech processor adjustments for keyer output were very easy. The dynamic range of the live microphone audio is significantly higher.

CT Interface

The CT interface was solid. No problems occurred on either phone or CW. Function key F1 sent CQ, F4 sent my callsign, etc.

CQ Loop

The automatic CQ loop timer saw limited action. Participation in the '91 CQP was so fabulous that relatively few CQs went unanswered. When the loop was used (the longest loop run was about 2 minutes), difficulties in switching back to microphone mode from loop mode was apparent. This transition is awkward because two steps are necessary:

- Turn off loop timer power
- Push "STOP" (disabling the loop timer usually resulted in starting the CQ message).

Initializing the loop was also inconvenient because the message began *after* the time delay. A better method would begin CQing immediately upon CQ loop power-up and automatically key STOP when loop is disabled.

Comments from others mention the danger of setting the loop and then falling asleep. Perhaps a loop counter which will count to 16 or so and then disable looping should be added. Since the CQ loop delay is of dubious value, I'll leave improvement implementation as "an exercise to the reader", as textbooks love saying.

Circuit Enhancements

The benefit of a bit of hindsight inspired some circuit improvements that greatly improve utility. Foremost is automatic microphone/keyer switching, since mechanically switching between the mic and keyer is untenable and leads to an under utilized keyer. Minor additions include a transmit watchdog timer to replace the simple T/R latch, a RECORD indicator LED, and some changes to the schematic of Part I.

Part I Schematic Modifications

The following changes should be made to the schematic of Part I:

- CW Keying. Change the 4.7k Ω resistor to the base of the CW key transistor to 1k Ω . Disconnect it from +5V, connecting it instead to Pin 10 of the parallel port (see schematic).
- Change the CQ Loop delay pot from 100k Ω to 50k Ω .
- Correct the CQ Loop 555 timer bypass capacitor connection. It is shown from supply to Pin 3; it should go between supply and ground.

Also, some confusion arose with the schematic diagram regarding the blocks containing diodes. These are 16-Pin sockets containing a removable header assembly holding diodes for message addressing. It is built this way so you can easily re-sector message addresses by simply removing one diode header and replacing it with another. Or an 8-section DIP switch could be plugged into a socket so you may manually address any location (for experimentation). Lots of redundant wiring is involved here; if you do not need this extra flexibility, permanently ground pins 1, 2, and 3, and only run wires to the pins where diodes are shown. This will save a great deal of wiring time!

Automatic Mic/Keyer Switching

The keyer is a nice accessory, but its four sentence vocabulary is inadequate for running stations. Thus, provisions for switching between mic and voice keyer are necessary. The operator has not yet been rendered

obsolete! A toggle switch is used for audio selection in the original version, but this is extremely inconvenient. Fortunately, the ISD parts have an auxiliary audio input, designed for cascading several devices which we may utilize. In voice keyer playback mode, memory array output is selected and appears at the device output. When the message ends or is aborted, the AUX input audio is selected.

Unfortunately, for equal output amplitudes between voice keyer and microphone, mic audio must be increased about 22dB. This is in addition to the extra gain necessary to accommodate low output dynamic microphones. Dynamic microphones produce much less output than the electret microphone specified by ISD. The internal AGC amplifier will run at maximum gain (about 24dB) with dynamic mics and still not provide sufficient output; poor signal-to-noise performance will result. The former "good-buddies" in the audience may use their old "power mike" here, but the rest of us will want to add a preamplifier to the voice keyer input. Further complicating the situation, Kenwood rigs use a separate audio shield, isolated from ground, on the mic line. Hum results if this shield is connected to chassis ground.

All is not lost, however, since these problems can be resolved with a ten cent dual op-amp.¹ We simply configure the first op-amp as a low noise ≈ 20 dB preamplifier and capacitively couple its output to the microphone input of the ISD1020. This output is also presented to the second op-amp, which provides gain for level equalization. Second amplifier output drives the ISD1020 AUX input. The gain of amplifier 2 is adjustable so that live audio and voice keyer audio are of equivalent amplitudes. We could instead vary the gain of the first stage, but this might compromise the system noise figure.

Microphone audio is normally fed through the preamplifiers into the ISD part, then on to the transmitter. When the keyer is activated, the mic input is deselected. ISD literature recommends external AUX muting, but this is not necessary. Ground isolation is accomplished by using both sides of the differential output stage, heavily attenuated.

My RF susceptibility problem with the original design was not caused by faulty circuit design. Post-mortem evaluation revealed a faulty op-amp power supply bypass capacitor. I replaced it with two parallel capaci-

tors, a 100pF disc ceramic for excellent high frequency bypassing (small value capacitors have high self-resonant frequencies) and a 0.1 μ F capacitor for bypassing lower RF frequencies. *Keep lead lengths short.* I soldered the capacitors directly across the op-amp supply pins, underneath the board. Ferrite beads cover all input and output lines, but have minimal effect.

Watchdog Transmit Timer/Latch

During CQP, occasionally one of the wires constituting the rat's nest I call the CVK prototype shorted to ground and the keyer sequenced through all four messages, key-down. Manually pressing STOP solved the immediate problem, but a "watchdog" timer—a device that replaces the Part I circuit transmit latch and prevents key-down periods exceeding a few seconds—is the proper circuit solution. This way, if something strange happens to the keyer, the transmitter will unkey after no more than the approximately six second timer delay. Of course, proper layout will eliminate the rat's nest, but the watchdog circuit prevents unforeseen problems, and actually turns out to be less expensive than the CMOS latch it replaces. Using another 555 timer, the circuit is triggered by keyer activation. Its output immediately goes high, staying high until either (a) it is reset by the EOM pulse, or (b) the time delay set by the 1.2M Ω resistor and 4.7 μ F capacitor expires, at which point the output drops low and the transmitter is unkeyed. Diodes connect the timer RESET pin to both EOM and Play/Record so the transmitter is de-activated during recording sessions. NOTE: RESET pin threshold voltage is nearly the same as the diode forward voltage drop. If you have problems with the timer not resetting with the EOM pulse, try exchanging the watchdog 555 with the CQ Loop 555 IC.

Battery Operation (and False Promises)

Part I promised that Part II would feature a very low power battery operated keyer design. Running on three "AA" batteries, the preliminary battery design uses a different START circuit that keeps Power Down (PD) high during idle. While this technique cuts idle power to nearly zero and is an excellent technique for a repeater voice IDer, etc., it disables microphone audio feedthrough. Thus, the microphone interface scheme presented here will not work. The basic design works fine on three cells, drawing about 25mA when active. But the schematic shown is active all the time; AA batteries will not

reliably supply this much current throughout a 48 hour contest. Also, the op-amp microphone preamplifier needs at least 9V, so an additional battery is needed.² Instead of multiple batteries that would require replacement during the contest, I designed the keyer for good 'ole +12V.^{3,4} Regulated +5V is obtained from the 12V nominal input through a three-terminal regulator.

The circuit burns about 30mA to 40mA. Slightly more when the internal speaker is active. A reduced power design is very possible, using low voltage op-amps and analog (solid state) switches, but who's shack cannot spare 40mA from a 12V supply?

Closing Comments

Time vs. Fidelity

Several people have asked my opinion regarding the time capacity versus audio bandwidth trade-off between the 12, 16, and 20 second ICs. Using the restricted audio Heil HC-4 "DX Dream Machine" microphone, I value extra time far more than extra fidelity, so I recommend the ISD1020 (20 seconds of 2.7kHz bandwidth). The five seconds per message is adequate for CQ calls and almost any canned exchange. For persnickety contest audiophiles (if such creatures exist), the extra bandwidth of the 16 second device will eliminate any "live-vs.-Memorex" difference. At four seconds per message, however, only a short CQ call will fit, thus you should re-sector the keyer for a longer Message 1 at the expense of one or more of the others. I cannot imagine a SSB application requiring the 4.5kHz bandwidth provided by the 12 second device.

More Than Four Messages

Four messages not enough? Remember, you may address up to 160 total messages, of equal or unequal length, if you wish. I implemented four (five including STOP) because that is what CT supported.

STOP from CT

CT offers no means of interrupting voice keyers comparable to the ESC key in CW mode, which immediately terminates transmission. Older style voice keyers had no STOP input, but since this problem has been rectified, the software problem should also get fixed. I have written Ken Wolff, K1EA, requesting he add STOP to the supported voice keyer control functions. If he implements my suggestion, ESC will pulse Pin 2 of the parallel port high. A resistor to an NPN transistor in parallel with the STOP push-button could then constitute the interface.

Ruggedness

The ISD IC is protected against static and some other common afflictions. I have inserted the part backward in its socket without damage. However, while working on the op-amp preamplifier with power applied, the ISD chip decided to protect the op-amp by fusing. Yes, a \$20 fuse. Be careful!

Acknowledgments

I am now (Oct. 22) receiving feedback from a few builders. Nothing significant yet, but I am sure Jack & Maggie will print any suggestions you have. I am greatly interested in your comments also. My thanks to design engineers Jim, KV6S, and Larry, WE6F, for their input on RF susceptibility, filtering, and low-noise audio amplifiers. 73 & happy building de Bob, N6IP!

Footnotes

1. Well, a bit more at Radio Shack.
2. Low voltage, low power op-amps are available.
3. Perhaps I'm stretching the truth, but this keyer is battery operated—use a 12V battery!
4. Any D.C. power supply from 10V to 16V will work fine.



You didn't think N6IP wrote these Voice Keyers articles all by himself did you?

RED ALERT

SAVE THIS DATE

SATURDAY, DECEMBER 21, 1991

OUR NCCC
ANNUAL CHRISTMAS PARTY
AT CASTAWAYS RESTAURANT COYOTE
POINT

SANTA N6BT CLAUS UNLIKE ANY
OTHER
GIFTS DOOR PRIZES
HOLIDAY CHEER

More information in December JUG

HENRY'S HONKINGS

de Henry, KJ6LD

MEETING REPORT

Those of you who didn't make it to the Wagon Wheel on Friday the 18th missed a good meeting! For starters, we had 34 people at the meeting. I'm sure each person told at least one "Sea Story", and some of our members probably told them all night.

I don't think the Wagon Wheel was expecting that many people, and they had to bring extra chairs upstairs. However, they gave us a great service, and were able to rapidly accommodate some latecomers.

Louese opened the meeting, and asked everyone to tell what they were going to do for the CQWW contest. You can find out who's going where in Ace's column. We also took in five new members: Tony, AE0M; Larry, WE6F; Andy, AE6Y; Jim, WB6CJE; Elaine, N6ZJM. Welcome!

Trey WN4KKN showed us slides of the incredible N5AU superstation. It's obviously one of the largest station in the country. They have 13 towers on the 20 acre site, generally with monobanders from 60 feet to approximately 100 feet. There are two 175 foot towers which support a full size delta loop on 80 meters, and sloper for 160 meters.

One of the main philosophies behind the station is that the operator should not have to use a rotator, but rather switch antennas when it's time to work another direction. Also, there are a number of signs on the wall reminding operators: "You're not LOUD if you're not calling CQ!"

Bob, N6TV, shared the program, and continued in the tradition of "The top reasons why you're not in the top 10."

NCCC People in the News: You can see Carl, AI6V, in the Alpha amplifier ad in the November CQ magazine. Paraphrasing the ad, he says, "Look Ma, No Hands! All I have to do is say PAPA FORTYVICTOR real fast thousands of times!" However, with the new analog storage chips, maybe now Carl will only have to say PAPA FORTYVICTOR really fast one time. How nice (and boring) it would be if winning a contest were that easy.

The November issue of CQ also had an article on the very large PJ9W effort. By the time you read this, ALEX, KI6EZ, will have torn up the low bands with them in the CQWW phone.

BOD MEETING

The Board of Directors' meeting was held at 6 PM on Friday, October 18th, at the Wagon Wheel Restaurant. Present at the board meeting were Louese KA6ING, Bob N6TV, Bob N6EK, Henry KJ6LD, Jim WA6SDM, and Ace, N3AHA.

1. The Christmas party has been moved to the Castaways at Coyote Point from Miguel's. Date still Dec. 21. We are negotiating with Miguel's for return of our \$100 deposit.

2. Next NCCC meeting will be joint with NCDXC on Nov. 8. Speaker Father Moran, 9N1MM. See further information in this issue.

3. Next BOD meeting set for Round Table Pizza Parlor, Nov. 18, at 7 PM, to be also a "casual" general membership meeting. All invited. See box elsewhere in this issue for directions and further info.

Respectfully submitted,
Henry, KJ6LD, Secretary/Treasurer

ALL INVITED Open Board of Directors Meeting November 18 7 PM

ROUND TABLE PIZZA SAN BRUNO

Since our regular meeting in November is being held jointly with NCDXC, this board meeting is one which all members are urged to attend to discuss the important and interesting topics: Rookie of the Year and Contester of the Year. And if Letterperson N6TV shows up, "10 Outstanding Ways to Eat Pizza". TO GET THERE: From either 101 or 280, take 380 exit toward El Camino Real. Take El Camino North past Tanforan and Navy Yard, past Sneath Lane, and turn right at the next light. See a big Lucky store. The Round Table Pizzeria is 2 or 3 doors away.

NCCC Treasurer's Report July 1, 1991, - October 18, 1991

	BUDGET	TO DATE
Membership Dues	\$3,000.00	\$2,366.00
Donations		\$1,269.00
JUG and Roster Ads	\$670.00	\$270.00
JUG and Roster Publishing	(\$1,800.00)	(\$521.69)
CQP	(\$1,000.00)	(\$366.24)
Membership Awards	(\$1,000.00)	(\$126.11)
Visalia Hospitality	(\$200.00)	\$0.00
Self-funding Events	\$0.00	(\$257.78)
Sponsored Awards	(\$150.00)	\$0.00
Contingency Fund	(\$200.00)	\$9.30
Total	(\$680.00)	\$2,442.48

Notes:

As of October 18, 1991, the balance in our Wells Fargo checking account is \$3002.35. (The repeater fund does not belong to the club; I do not include it in the Treasurer's report.)

Respectfully Submitted, Henry Stewart, Secretary/Treasurer, KJ6LD
8/26/91

SPACE FOR ACE

Hello to Louese's Miserable Minions (LMM)!

It seems I have goofed when I looked at the 1991 ARRL DX scores in QST. There were also some fine scores in the contest from WB6SHD and WN4KKN on single bands. Seems they set some new records or something. Well, honestly, it is easier to pull out the top score for single ops (all bands) and more difficult to look for those single band entries all the way at the bottom of the list. Obviously, not a good enough excuse—so my apologies to those I missed in the kudos corner! He speaking of missing kudos in the kudo corner—WR6R finished 2nd in the world from KH6 in the ARRL DX SSB contest. Whoops, missed another one.

Boy, last meeting was crowded. It was great to welcome some new members—total 5. Yechah and welcome aboard to Larry, WE6F; Tony, AEOM; Andy AE6Y; Elaine, N6ZJM; and her hubby Jim, WB6CJE. We know you'll enjoy the club and we're looking forward to hearing some contest scores from you. Hope to see you at many more meetings. Also had some visitors who weren't interested in joining that night, but nonetheless we all had a good time.

A reminder to all of you—please send a copy of your summary sheet to the VPCC for inclusion of your top score into the JUG. The VPCC is capable of sending your score on to the 5 Meg Chairman. Don't worry, it will be taken care of. So for now, send your summary sheet copy to me, N3AHA, and I will forward it to AD6E for the 5 MEG.

AL, AD6E had a hard disk crash and lost the 5 Meg database. So if you have scores from Jan 91 to Oct. 91, send him one sheet totaling your contest scores for the year.

That's all for now. Hope y'all kicked butt in CQ WW.
73, de Ace, N3AHA

CONTEST SCORES THESE ARE THE ONES SENT TO N3AHA

CALIFORNIA QSO PARTY CALL	QSOs	MULTS	SCORE	* INDICATES NEW RECORD
W6GO (N6IG OP)	3011	57	373122	*
N6RO (WA6VEF OP)	2766	57		
WX6M	2017	57	230394	*
W6BIP (N1EE)	1745	57	216000	
WA6AUE	1736	57		
W6ERN	1644	58	190704	
N6EK	1264	57	173508	
N6TV	1131	*	183222	CW ONLY
N6CCL	1256	57	143184	
KD6XY (KA6ING, VE7HKI)	880	57	100320	
KI6VB	846	57	96444	
W6FAH	745	57		
AD6E	628	54		
WA6SDM	427	55	56045	
KJ6LD	307	55	40700	
WN4KKN/M	324		15937	
K4UVT	283	33	9339	

CQ WW WPX CALL	QSOs	MULTS	SCORE
AA6QV	433	261	193401

ALL ASIAN CALL	QSOs	MULTS	SCORE
N6EK	628	210	135450 CW
NF6S	550	158	112464 CW
WN4KKN/6	298	120	40320 SSB

A FEW SPRINT SCORES CALL	QSOs	MULTS	SCORE
AJ6V	234	45	10530 CW
WN4KKN/8	192	42	8064 SSB
K6LRN			4060 ?

IARU CALL	QSOs	MULTS	SCORE
NF6S	346	52	63128 CW

ARRL VHF CALL	QSOs	MULTS	SCORE
WN4KKN	5	4	20

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WHAT ARE MEMBERS' PLANS FOR COMW?

HERE IS SOME FEEDBACK FROM PHONE CALLS AND THE LAST TWO MEETINGS.

N6IG: PH, W6GO: CW, W6GO; N6AG: PH, W6GO; CW W6GO; KJEST: PH, PJ9W; CW, N6RO; WA6YOM: PH, S/O; N6CCL: PH, S/O; K6SH: PH, S/O; N6DA: PH, S/O; CW, S/O; K6PH: PH, S/O; CW, S/O; K6ZE: PH, S/O (GOAL 1.5M); KJEST: PH, PJ9W; N6GCG: PH, ?; CW, ?; K6ZK: PH, S/O (LOW POWER); CW, S/O (LOW POWER); NTZE: CW, S/O (LOW POWER); KJLV: PH, S/O (GOAL 2.6M+); CW, S/O (GOAL 2.1M+); WA6AUE: PH, S/O 40 METERS; N6EK: PH, S/O; CW, S/O; N6ZJ: PH, M/S W6QHS; K6RF: PH, M/S W6QHS; K6HJH: PH, S/O; N6X6M: PH, S/O; N1EE: PH, M/S AG6D; CW, M/S AG6D; N6CF: PH, S/O; CW, S/O; KJ6FD: PH, S/O; N6ZB: CW, S/O; K6HNR: PH, S/O; CW, S/O; N3AHA: PH, S/O N6TV (GOAL 3.0M); CW, S/O N6TV (GOAL 2.0M); AE6S: PH, M/S AG6D; CW, M/S AG6D; KJ6LD: PH, M/S AG6D; CW, S/O; W6NLG: PH, M/S W6XB; N6XI: CW, ?; WA6SDM: PH, S/O; CW, S/O; K6QAT: PH, S/O; CW, S/O; K6XV: PH, ?; CW, ?; N6IP: PH, S/O; CW, M/S AG6D; KJ6S: PH, S/O; KJ6CG: PH, S/O; CW, S/O; W6QHS: PH, M/S; CW, M/S; N6XT: PH, ?; N6RT: PH, ?; CW, M/S P40V; WB6SHD: PH, M/M N6TU; CW, M/M SO CAL (BOO!); WN4KKN: PH, ?; CW, S/O 30 AMERICA; N6TU: PH, M/M; CW, S/O; N6ZJM: PH, M/S; K6ING: PH, S/O 10 METERS; CW, ?; K6NA: CW, S/O; AE6Y: CW, S/O; N6S: PH, S/O W6H (GOAL 3.0M); CW, S/O W6H (GOAL 2.0M); AD6E: PH, M/M N6TU; CW, S/O; W6COW: PH, S/O; CW, STATION AVAILABLE; W6AF: PH, S/O; CW, S/O; W6Z2: PH, S/O; CW, M/S P40V; N6TV: CW, M/S P40V.



Happy Picnicers at August meeting.
Coyote Point AD6E, his daughter, and N3AHA



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